

Rabies in Montana, 1998

During 1998, 1056 specimens were submitted to the Department of Livestock's Veterinary Diagnostic Laboratory in Bozeman for rabies testing. Of the 1056 specimens submitted for testing, 575 (54.5%) were domestic animals such as dogs, cats, and ranch animals. The remaining 481 (45.5%) specimens were predominantly wild animals, primarily bats, skunks and rodents.

Table 1. Test Results for Rabies in Montana Animals, by Species - Montana 1998			
	No. Positive	No. Tested	Perc. Positive
Badger	0	2	0.0
Bat	21	255	8.2
Bear	0	1	0.0
Cat	1	245	0.4
Cattle	1	46	2.2
Cougar	0	4	0.0
Coyote	0	5	0.0
Dog	2	230	0.9
Ferret	0	4	0.0
Fox	0	10	0.0
Goat	0	1	0.0
Gopher	0	3	0.0
Hamster	0	1	0.0
Horse	2	17	11.8
Llama	0	1	0.0
Marmot	0	1	0.0
Mink	0	1	0.0
Mole	0	1	0.0
Moose	0	1	0.0
Mouse	0	17	0.0
Muskrat	0	7	0.0
Packrat	0	2	0.0
Rabbit	0	13	0.0
Raccoon	0	31	0.0
Rat	0	2	0.0
Sheep	0	5	0.0
Skunk	38	97	39.2
Squirrel	0	7	0.0
Swine	1	1	100.00
Vole	0	2	0.0
Weasel	0	3	0.0
Wolf-hybrid	0	1	0.0
Woodchuck	0	1	0.0
TOTALS:	66	1017	6.5

As indicated in Table 1, 66 (6.5%) of the 1017 specimens suitable for testing were positive for rabies. Fifty-nine of the 66 positive tests (89.4%) were found in either skunks or bats. The seven remaining positive specimens were in domestic animals, specifically; one cat, two dog, two horses, one pig and one cow.

Specimens testing positive for rabies were submitted from 25 counties during the period (Table 2). While the distribution of rabies-positive animals by county and species helps determine trends in occurrence, the information alone should not be used to determine the need for post-exposure rabies prophylaxis. Animals submitted for testing do not represent a random sample, as a result, the data collected cannot be generalized to all counties or all members of single species.

Table 2. Montana Counties Submitting Positive Rabies Specimens, by Species, Montana 1998								
County	Bat	Cat	Cattle	Dog	Horse	Skunk	Swine	Total
Big Horn						4		4
Blaine	1							1
Carter			1			2		3
Cascade	2							2
Choteau	1							1
Custer	1							1
Fallon					1	12	1	14
Fergus	1					2		3
Flathead	1							1
Gallatin		1						1
Hill	1							1
Judith Basin	1							1
Lake	2							2
Missoula	2							2
Phillips				1		1		2
Powder River					1	6		7
Powell	2							2
Ravalli	6							6
Roosevelt						1		1
Rosebud						3		3
Sheridan						1		1
Treasure				1				1
Valley						3		3
Wheatland						1		1
Yellowstone						2		2
TOTALS:	21	1	1	2	2	38	1	66

Physicians treating individuals for animal bites or scratches should evaluate each patient for possible exposure to rabies. If an exposure is suspected, state law requires reporting to the local county health authorities. Public health authorities can assist in determining the need for rabies prophylaxis and ensuring that other potential contacts are evaluated for prophylaxis. When determining the need for rabies prophylaxis, the following factors should be considered before treatment is initiated:

- * the probability of an exposure (whether or not rabies virus could have been introduced into an open cut or wound in the skin or mucous membrane),
- * the circumstances regarding the possible exposure (provoked vs. unprovoked attacks),

- * the species of the animal involved in the incident, and
- * whether or not the animal is available for observation or testing.

While domestic dogs, cats and ferrets can be quarantined for ten days and observed for evidence of rabies after a possible human exposure, it is recommended that other animals be laboratory tested for rabies. Since many rodents (such as squirrels, hamsters, guinea pigs, chipmunks, rats, and mice) and logomorphs (including rabbits and hares) are almost never found to be infected with rabies and have not been known to cause rabies among humans in the United States, these animals can generally be assumed to be free of rabies and require no testing. However, in any unusual instances, such as unprovoked attacks by any mammal, consultation with local health authorities is recommended.

In all instances of potential human exposures involving bats, the bat in question should be safely collected, if possible, and submitted for rabies diagnosis. Rabies postexposure prophylaxis is recommended for all persons with bite, scratch, or mucous membrane exposure to a bat, unless the bat is available for testing and is negative for evidence of rabies. **Postexposure prophylaxis might be appropriate even if a bite, scratch, or mucous membrane exposure is not apparent when there is reasonable probability that such exposure might have occurred.** For example, if you awaken to find a bat in your room, see a bat in the room of an unattended child, or see a bat near a mentally impaired, intoxicated or sleeping person, seek medical advice and have the bat tested if possible.

Due to the continued presence of rabies, all mammals in Montana are potentially at risk of infection. While vaccination will minimize the risk of infection in many domesticated animals, no reliable control measures currently exist for other wild species. The high prevalence of rabies in some wild animals (skunks, foxes, raccoons, and bats) has resulted in laws prohibiting the possession of such animals as pets (50-23-102 MCA). In addition to this prohibition, other precautions intended to minimize one's risk of exposure can be taken. Such precautions include:

- * Avoid Animals that are acting in an unusual manner.
- * Unprovoked attacks by any carnivorous animal may indicate rabies. Report such attacks to your physician or health department.
- * Do not adopt wildlife as pets; it is dangerous.. and often unlawful.
- * Teach children to stay away from wild animals and unknown dogs and cats. Be sure they report any animal bites or scratches immediately.
- * Obey animal control ordinances and leash laws.
- * Be careful when assisting injured animals.. they are often in pain and likely to bite.
- * Be aware that there is a safe vaccine for people exposed to rabies, but to be effective it must be administered soon after exposure.
- * Follow your veterinarians recommendations to vaccinate your pets against rabies. Protecting our pets creates an effective barrier between wildlife rabies and people. Since homes are not impervious to the occasional wild animal, even pets which never leave the house should be vaccinated.

While rabies in humans is rare, pre-exposure rabies vaccination is available and recommended for veterinarians, animal control workers, and those who work with wildlife. Workers with frequent or continuous exposures should have boosters and/or a titer check every two years following initial vaccination; serology is preferred.

Rabies should be considered in any patient with a rapidly progressive encephalitis of unknown etiology, particularly in those who have had an exposure or other close contact with a recognized reservoir of the disease. Individuals infected with rabies who do not receive post-exposure prophylaxis generally experience a rapid onset of symptoms and death. No survivors have been reported since 1977.

Local and state health departments no longer stock rabies biologics. Physicians, pharmacists and pharmacies can acquire rabies biologics directly from the manufacturer on an immediate need basis, generally with next day service, by calling:

Connaught Laboratories	1-800-VACCINE (822-2463)	Vaccine & HRIG
Bayer Pharmaceuticals	1-800-288-8370	HRIG Only
SmithKline-Beecham	1-800-366-8900	Vaccine Only
Chiron	1-888-CHIRON-7	Vaccine and HRIG

Examination of specimens for rabies virus is performed at the Department of Livestock's Veterinary Diagnostic Laboratory in Bozeman. While there is presently no charge for testing and no specimens are refused, specimens should be submitted only if the test result is of value (e.g., to confirm the presence of rabies in an area or a species with little or no rabies information available or to determine if treatment is necessary after an exposure).

Specimens may be submitted by anyone. However, the assistance of a veterinarian may be helpful in preparing the specimen for submission (all specimens must be dead and, unless the specimen is a bat, only the head shipped to the lab). To ensure each specimen arrives suitable for testing, specimens should be shipped on ice packs Monday through Thursday. Freezing the specimen is not recommended. A request for rabies testing and information on whether or not a human exposure occurred should be included with the shipment.

Mailing Address:

MT Veterinary Diagnostic Laboratory
PO Box 997
Bozeman MT 59771

Street Address:

MT Veterinary Diagnostic Laboratory
Corner of S 19th & Lincoln
Bozeman MT 59715

Consultation on rabies prevention and control is available from the Epidemiology Office by calling 444-0273.

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